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ABSTRACT

To help ensure that multidisciplinary decision making in special education results in an appropriate education for exceptional students, principles drawn from theory and research on group decision making and problem solving were used to develop a decision model to serve as a guide for structuring and assessing the decision process at the school building level. The proposed model incorporated principles governing (a) the scope of the process, (b) the separation of specific problem solving procedures, and (c) the nature of member participation. Members of 230 planning groups were surveyed about their attitudes concerning 14 group activities chosen to reflect implementation of the model. Chi-square tests showed significant differences between the criterion level of 75% of the groups reporting participation or acceptance and reported levels of participation or acceptance for each of the 14 activities. As an evaluation tool, the model pointed to a notable deficiency in multidisciplinary establishment of criteria to guide the decision making as well as a lack of team planning for implementation and evaluation of the student's new educational program. (SBH)

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A DECISION MODEL FOR SPECIAL EDUCATION
PROGRAMMING TEAMS

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Abstract

To help ensure that multidisciplinary decision making in special education results in an appropriate education for exceptional students, principles drawn from the theory and research on group decision making and problem solving were used to develop a decision model to serve as a guide for structuring and assessing the decision process at the school building level. The proposed model incorporates principles governing (a) the scope of the process, (b) the separation of specific problem-solving procedures, and (c) the nature of member participation. Members of 230 planning groups were surveyed about their attitudes concerning 14 group activities chosen to reflect implementation of the model. Chi-square tests showed significant differences between the criterion level of 75% of the groups reporting participation or acceptance and reported levels of participation or acceptance for each of the 14 activities. As an evaluation tool, the model pointed to a notable deficiency in multidisciplinary establishment of criteria to guide the decision making as well as a lack of team planning for implementation and evaluation of the student's new educational program.

Organizational theory and research in the area of group decision making can provide special education administrators with a perspective for developing a decision-making model which addresses some of the continuing problems encountered in trying to assure appropriate programming for exceptional students.

The first section of this paper presents some general principles from the literature on group decision making, discusses how the findings are related to decision-making problems in special education pupil planning and programming, and proposes a decision-making model which suggests how these findings might be used to develop a basic conceptual framework for structuring and evaluating decision practices at the school building level. The second section describes an exploratory study designed to determine the extent to which selected activities indicative of the proposed model for a team decision-making process are either acceptable to members of programming teams (PTs) or reported to be in use. This exploratory study is an effort to suggest the types and magnitude of changes required to implement the proposed model.

Perspectives from Organizational Theory and Research

Components of rational decision making. Several rational decision-making models which are appropriate for group use have been proposed in organizational

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theory (Bass, 1967; Griffiths, 1959; Morphet, Johns, & Reller, 1967; Vroom & Yetton, 1973). These models identify similar types of activities which involve (a) identifying the problem, (b) generating alternatives, and (c) selecting a solution. Programming team decision making can be analyzed in accordance with these types of activities as follows:

Perceiving the problem entails collecting and examining relevant information, determining the educational significance of the data, and identifying the student's special service needs.

Exploring alternatives includes generating a broad list of alternatives and recognizing the student's special service needs as the primary criteria for selecting an appropriate solution.

Selecting a solution requires evaluating each proposed alternative, selecting one as the most reasonable course of action, and planning program implementation and monitoring.

This typology is proposed as a conceptual framework for PT decision making. Thus, a primary contribution made by social science to a model of rational PT decision making is the tentative identification of steps which are hypothesized to effectively and efficiently guide the group through the decision-making process.

Structured separation of activities. A tendency to adopt the first solution which minimally satisfies a majority of the group members, often called satisficing, characterizes most group decision making if efforts are not made to separate the generation of alternatives from their evaluation (March & Simon, 1958). Maintaining the separation of specific problem-solving procedures has been found to result in greater generation and consideration of alternatives (Maier, 1958, 1963; Maier & Hoffman, 1960). Goodchilds, Schonfield, & Gibb (Note 1) suggest, moreover, that failure to maintain this logical order of generation prior to evaluation leads to

selecting an alternative on the basis of unstated criteria and/or unexamined feelings about its rightness instead of on the basis of rational, objective considerations. Furthermore, decision quality and group acceptance of the decision increase when a committee's discussion is synchronized by the use of systematic procedures to guide the group through minimum problem-solving stages (Maier, 1958, 1963; Maier & Hoffman, 1960; Maier & Maier, 1957; Maier & Solem, 1962). Thus, organizational research suggests that having an agenda of logically ordered activities helps a group proceed in a more controlled and systematic manner. This control results in a more considered decision which induces greater commitment.

Nonspecialized participation. Research also suggests that both the type of participation called for and the nature of the decision(s) to be made affect group behavior. Shaw (1964) reviewed several studies which indicate that a directive leader with specialized participation among group members is best when (a) the problem is single-faceted; (b) one solution is correct or better than all others; (c) the leader has the skill and experience to synthesize members' contributions; and (d) acceptance of the decision by group members is not of great importance. This limited participation approach has characterized the clinical model of diagnosis in educational decision making; that is, a multidisciplinary group is convened but members expect to participate only in tasks related to their area(s) of expertise. However, Shaw also discusses a number of studies which suggest that a model emphasizing nonspecialized participation by all members is optimal when (a) a problem has multiple parts; (b) group members possess information and skills needed to define the problem, generate alternatives, and choose a solution; and (c) acceptance of the decision among implementers is desired. The authors believe that pupil programming and placement decision making has the characteristics which Shaw suggests would benefit from nonspecialized participation.

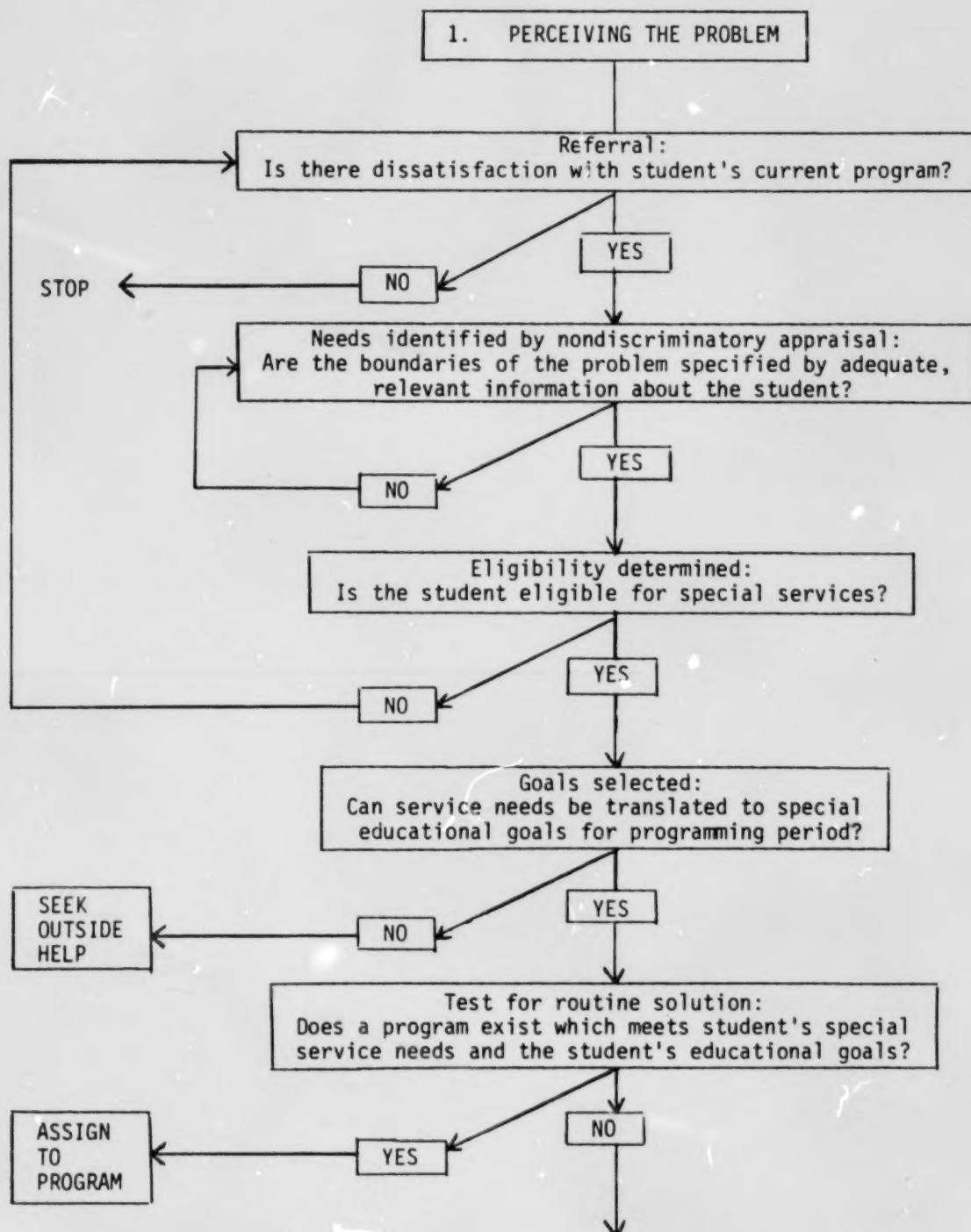
Furthermore, acceptance of the decisions is increasingly important when implementation of the decision requires initiative, judgment, or creativity on the part of the implementers as it does in a teaching situation. Hoffman and Maier (1959, 1961) found that a higher number of group members contributing to the discussion of the adopted solution increased the acceptability of the decision. However, members who did not contribute accepted the group's decisions if they judged that other members contributed sufficiently. Hoffman and Maier, therefore, suggested that the perceived opportunity to participate leads to acceptance of the decision. The implication for special education decision making is that a model for pupil programming procedures should provide an opportunity for nonspecialized participation by members.

In summary, three general principles with implications for special education decisionmaking were drawn from the literature of organizational theory and empirical research dealing with group decision making:

1. Rational decision making encompasses three components of problem solving: (a) defining the problem, (b) generating alternatives, and (c) selecting a solution.
2. Group decision making needs to be structured to facilitate systematic and synchronized group interaction and to maximize decision quality by separating the generation from the evaluation of alternatives.
3. The nature of pupil programming calls for a decision-making structure which provides an opportunity for group members to participate on an equal basis in a nonspecialized manner.

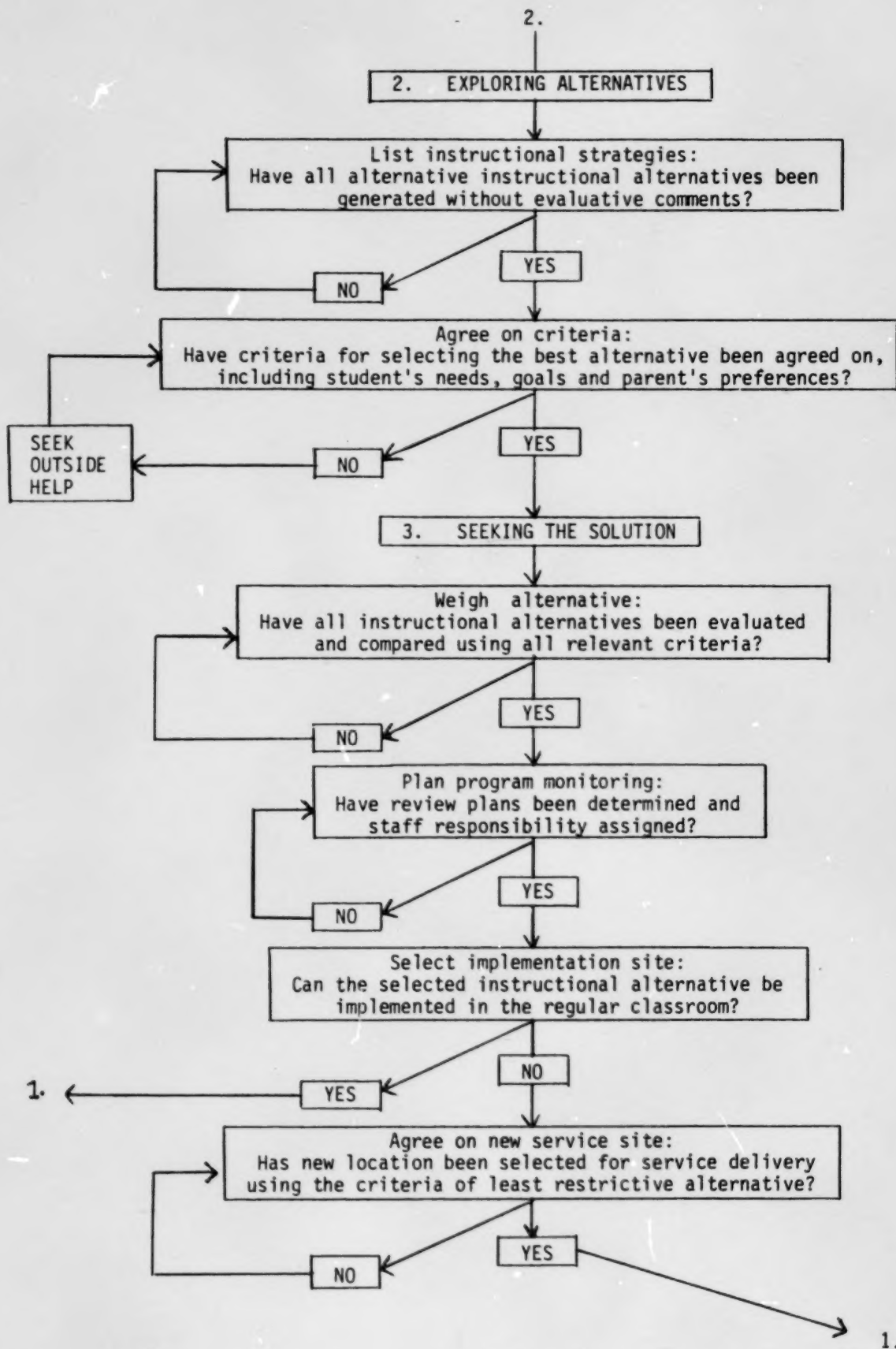
The PT Decision Model

To apply these principles to PT decision making, a task analysis was undertaken by the authors and reviewed and field-tested by personnel from a cooperative State Education Agency. The analysis identified the logical steps involved in minimally fulfilling the PT decision-making responsibilities.



2.

Figure 1: Logical Steps in the Placement Team Decision Model



defined by that state (see Figure 1). The proposed model results when the three principles are considered in conjunction with the logical steps of PT decision-making.

To illustrate, an interdisciplinary placement team which employs the three-component process of rational decision making, separates the generation and evaluation of alternatives, and utilizes a nonspecialized mode of participation could be described as follows:

1. The team establishes its agenda, allocating time to the appropriate decision steps in each of the three problem-solving components. The team defines the problem by pooling available information, agreeing on the student's needs, and selecting appropriate special educational goals, if required.
2. Every member explores the problem by generating instructional alternatives from his own perspective. Members refrain from making evaluative comments at this time but agree on the criteria with which to weigh alternatives.
3. The team seeks a solution by evaluating the instructional alternatives recommended by each member and selecting the alternatives which best meet the criteria. When an instructional alternative is chosen, the team decides on the location for implementing the selected program and plans for program implementation and monitoring.

A survey of PT members in the cooperative state was conducted to suggest the types and magnitude of changes which might be required to implement this decision model.

Method

Subjects and Sampling Design

All public senior ($n = 165$) and junior ($n = 136$) high schools and a random sample of one-third of the elementary schools ($n = 121$) in Connecticut were selected as the initial pool and nearly half of these agreed to participate in the study (53.6%, senior high; 57%, junior high; 52.9%, elementary). From each

school's list of newly placed handicapped students receiving special services, one student was randomly selected; 8% of the students had been classified as educable mentally retarded (EMR); 55% as learning disabled (LD); and 37% as socially and emotionally disturbed (S&E). The members of each selected student's PT were identified, and a questionnaire was mailed to the school personnel on each team. PTs contained an average of 6-7 members per team. Out of the 1,536 questionnaires mailed, 1,478 (96.2%) were returned from members of 230 PTs. For 179 PTs, all team members returned their surveys.

Measurement

The questionnaire measured PT members' perceptions of and attitudes toward their own participation in 14 activities relating to the use and acceptance of the proposed PT decision model during programming meetings. These 14 activities were used to represent the logical steps of PT decision making which encompass the three components of rational decision making (perceiving the problem, exploring alternatives, and selecting a solution) as separate problem-solving procedures.

Two types of questions were used. First, PT members were asked to indicate whether they usually participated in five specific activities. The activities were presented as statements (shown below) to be rated on a scale of 1 (representing strong agreement with the statement) to 5 (strong disagreement).

1. I usually contribute information to the PT.
2. I frequently interpret information for the PT.
3. I usually propose alternatives.
4. I usually evaluate alternatives.
5. I frequently participate in making final decisions.

Next, respondents were asked to indicate whether they felt they should perform the following activities (1) often (75-100% of the time), (2) sometimes (40-60% of the time), or (3) rarely (0-25% of the time).

1. Present information relevant to the case.
2. Interpret information relevant to the case.
3. Suggest student's subject matter needs.
4. Use student needs as guidelines for judging programming alternatives.
5. Suggest instructional methods for student.
6. Finalize decisions.
7. Set evaluation criteria for student's performance in special education program.
8. Set date for review of PT decisions.
9. Assign responsibility for implementation of the student's special education program.

Data Analysis

General descriptive procedures and Bartlett's chi-square test were used to answer the first question concerning the extent to which current PT practices and attitudes reflect those activities required to implement the proposed rational decision-making model. The PT was the unit of analysis since the PT decision model uses a group problem-solving approach. The mean response of each team for each activity was obtained and the team was assigned to a participation category indicating whether the team mean reflected specialized or nonspecialized participation. Consistent with the authors' belief that a nonspecialized participation pattern may be optimal in PT decision making, nonspecialized participation was defined in the following manner: nonspecialized participation (+) was assigned to a PT when at least three-fourths of the

members in a group indicated that they either reported (a) participating in a specific decision-making activity or (b) believing participation was appropriate. Specialized participation (-) was assigned when less than three-fourths of the members within the teams indicated performing or believing in the appropriateness of the activity. The percentage of PTs in each participation category was tabulated. A chi-square test was made to determine if a significant discrepancy between the criterion level and reported levels of (a) participation or (b) acceptance of each activity. The criterion level of the activity's reported use or acceptability was defined as 75% of the PTs assigned to the nonspecialized participation category, indicating that a substantial majority of the PTs perceived participation in a given activity as appropriate or usual PT behavior.

Results

PT Participation in Rational Decision Making Activities

The chi-square test was significant for differences between current participation levels and the criterion level of 75% participation for all activities except contributing information to the PT ($p < .001$). That is, reported participation or acceptance was significantly lower than the criterion in 13 of 14 activities. The percentage of PTs that perceived participation as either appropriate or usual PT behavior in each of the decision-making activities is reported in Table 1, which shows the extent to which the proposed decision-making process is currently implemented or considered appropriate.

Insert Table 1 about here

Usual PT Behavior. The chi-square tests showed that the criterion level was met for only one activity, contributing information (90% of the PTs were found to use nonspecialized participation). One other activity, participating

in making final decisions, was reported by more than half of the PTs (65%) as usual PT behavior. However, less than half of the PTs reported interpreting information (43%), proposing alternatives (25%), or evaluating alternatives (35%) as included in their usual PT process.

Appropriate PT Behavior. The chi-square tests showed significant negative differences between perceived attitudes related to PT participation and the criterion level for all nine activities. Moreover, only three of the activities were perceived as appropriate by more than half the PTs; these were presenting information (65%), using needs as guidelines (52%), and interpreting information (43%). The remaining six activities included in the proposed model of PT decision making were perceived as inappropriate PT behavior. They were suggesting student's needs (15%), finalizing decisions (12%), setting a date for PT review (5%), assigning responsibility for implementation (5%), and setting evaluation criteria (0%).

Thus, the proposed activities which concern prescribing, implementing, and monitoring the student's program were not perceived as appropriate PT activities. It is probable that these activities are not performed by PTs even though State Education Agency personnel assisted in identifying them as logical steps in the programming process. However, activities concerning diagnosis were reported as appropriate by a substantial number of PTs (mean percentage of 61).

Discussion

The Model vs. Reported Practice and Beliefs

In answer to the question concerning the extent to which the proposed decision model is reflected in current PT practice and beliefs, the data show that eight of the fourteen decision activities are reportedly performed

or considered appropriate by a quarter or more of the programming teams. However, six of the activities believed to be necessary to ensure appropriate decisions were virtually nonexistent in practice or were considered inappropriate for PT practice. While arguments can be offered that the addition of these activities to the PT repertoire is inhibited by lack of training and time required for their implementation, the data suggest that the most fundamental problem facing administrators who desire to adopt the decision-making model will be attitudinal change. The model's comprehensive and nonspecialized participation approach to multidisciplinary pupil programming is not likely to be accepted as long as most PT members perceive that the activities in the proposed decision model are inappropriate.

Given the magnitude of discrepancy between the model and reported practices and attitudes, use of external means may be necessary if the changes in PT procedures suggested by the model are desired. General methods for structuring PT meetings in a visible manner may be needed to assure that PT processes address all necessary activities and provide for the separation of problem exploration from the evaluation of alternatives. Two standard administrative methods for achieving this structuring of activities are (a) using an agenda which reflects all major activities and (b) establishing criteria to serve as a basis for subsequent discussion. Checklists could serve the multiple purposes of an agenda, a resource list, and a record of things considered. Likewise, establishing criteria potentially increases the efficiency of the decision process by providing agreed-upon guidelines for (a) subsequent generation and evaluation of alternatives, (b) communicating the PT's rationale for their decisions to the students' parents, (c) monitoring the students' progress, and (d) reviewing the continuing appropriateness of the program. Moreover, when evaluative criteria are specified during decision making, future

decisions about the student are less likely to be distorted by pressure from heavy case loads or unsystematic, subjective information about the students' progress: the criteria have made the PT aware of the type of information needed for the review and have thus allowed the PT to insure that the needed information will be available.

The Model as an Evaluation Tool

In addition to structuring the decision-making process, the model can be used simultaneously and with no additional effort by a team or its chairman to assess their process and identify administrative deficiencies which may ultimately affect the ability of the PT to attain its goal of delivering an appropriate educational program to each special education student. Such assessments suggest areas in which the PT may need additional structure or inservice training to improve the effectiveness of discussions. On a district-wide basis, the model may be used as a framework for assessing the adequacy of the various building-level procedures throughout the district in order to provide technical assistance where it is needed. For example, in this study the model pointed to a need for PTs to pay more attention to planning for implementation and monitoring and to begin to specify evaluation criteria.

In conclusion, organizational change is most effective when the goals are clear and behaviorally described. Having a framework such as the proposed decision model provides a clear and common set of expectations for PT members. Furthermore, identifying and selecting activities that require remedial emphasis allows the team to set reasonable and manageable goals. External means may be necessary to prompt PTs to include missing activities in their programming processes if prior omission has an attitudinal basis. However,

once participation in a given activity is internalized by team members, the external methods may be omitted except as an aid to help integrate new group members such as parents and regular classroom teachers. Thereafter, occasional use of external means to monitor the process and maintain performance would be minimally sufficient.

Table 1

Percentage of PTs Indicating that the Model
Activities are Appropriate or Usual PT Behavior

Usual PT Behavior		Appropriate PT Behavior	
Activity	Percentage of PTs with non-specialized participation	Activity	Percentage of PTs with non-specialized participation
Perceiving the Problem			
Contributing information	.90	Presenting information	.65
Interpreting information	.43	Interpreting information	.45
Exploring Alternatives			
Proposing alternatives	.25	Suggesting student's needs	.15
		Using needs as guidelines	.52
		Suggesting methods	.12
Seeking a Solution			
Evaluating alternatives	.35	Finalizing decisions	.12
Participating in making decisions	.65	Setting evaluation criteria	.00
		Setting data for review	.05
		Assigning implementation responsibility	.05

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